

Memorandum

Date: 13 May 2008
 To: Downtown Study Committee (DSC)
 From: Jon Oxman
 Re: Needham Downtown Study
 Subject: **Review of the Impact of Proposed Zoning on Building Size**

At the last DSC meeting the question was raised if the maximum FAR and parking requirements in the proposed Overlay Districts allow for buildings of large enough size.

For the purpose of evaluating the impact of the proposed requirements, alternative development scenarios of hypothetical development projects have been prepared. These reflect different FAR requirements and assumptions on the minimum amount of required parking spaces to be reduced by the payment of a fee to the parking fund. See the attached alternative development scenarios and summary.

On the basis of this analysis we recommend the following adjustments to the proposed maximum FAR requirements:

District	Proposed FAR	Alternative FAR
Needham Center Overlay Sub-District A	1.5	2.0
Needham Center Overlay Sub-District B	1.2	1.5
Lower Chestnut Street Overlay District	1.5	No Change
Garden Street Overlay District	1.2	No Change
Highland Avenue Business District	1.0	No Change

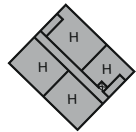
Summary of Alternative Development Scenarios Under Proposed Zoning

Needham Downtown Study - 13 May 2008

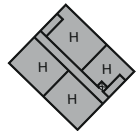
	Description	Stories	Lot Size	Building Footprint	Building Area	FAR	Parking				
							Required	Provided	U/G	Surface	Waiver
1A	Theater Block Mixed Use 12 Housing Units	4	20,184 SF	11,037 SF	29,088 SF	1.44	52	35	24	11	17 (32%)
1B	Theater Block Mixed Use 16 Housing Units	4	20,184 SF	11,037 SF	35,448 SF	1.76	58	35	24	11	23 (40%)
2A	1110 Great Plain Ave Mixed Use 4 Housing Units (As Built)	3	18,964 SF	7,935 SF	20,887 SF	1.10	47	32	13	19	15 (32%)
2B	1110 Great Plain Ave Mixed Use 8 Housing Units	3	18,964 SF	7,935 SF	23,342 SF	1.23	53	32	13	19	21 (40%)
3A	392 Chestnut Street Medical Offices 2 Lots (As Built)	2	32,060 SF	4,916 SF	9,939 SF	0.31	50	50	-	50	0 (0%)
3B	392 Chestnut Street Medical Offices 1 Lot	2	17,660 SF	4,916 SF	9,939 SF	0.56	50	18	-	18	32 (64%)
3C	393 Chestnut Street Medical Offices 1 Lot - Underground Parking	2	11,660 SF	4,916 SF	9,939 SF	0.85	50	18	18	-	32 (64%)
4A	Chestnut Place Mixed Use - 2 Floors Med Offices 1 Floor Housing	3	25,633 SF	16,765 SF	50,295 SF	1.96	185	35	32	3	151 (81%)
4B	Chestnut Place Mixed Use - 1 Floor Med Offices 2 Floors Housing	3	25,633 SF	16,765 SF	50,295 SF	1.96	117	35	32	3	82 (70%)
4C	Chestnut Place Mixed Use - 1 Floor Med Offices 2 Floors Housing - Smaller Building	3	25,633 SF	8,400 SF	25,200 SF	0.98	59	55	32	23	4 (7%)

Theater Block - Option 1A - Mixed Use - Retail & Housing - 12 Housing Units

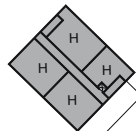
Proposed Project



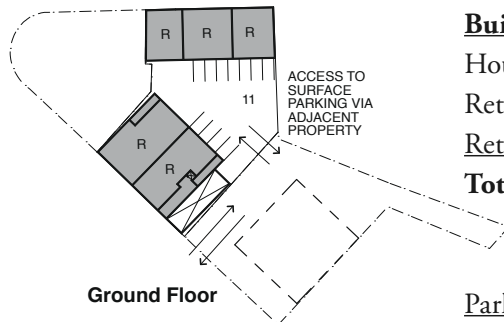
Fourth Floor



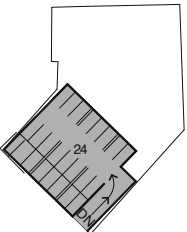
Third Floor



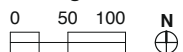
Second Floor



Ground Floor



Underground Parking



Description

- 1st Floor Retail
- 2nd, 3rd & 4th Floors Housing
- 1 Level Underground Parking

Lot Size 20,184 SF
Frontage 216 FT
 (111 + 105 FT)

Building FootPrint

Building A 5,020 SF
 Building B 6,017 SF
Total 11,037 SF
 (55%)

Building Size

Housing (12 Units) 19,108 SF
 Retail - Existing 5,020 SF
 Retail - New 4,960 SF
Total 29,088 SF

Parking 7,824 SF
Total w/ Parking 36,912 SF

Off-Street Parking Spaces

Underground 24
 Surface 11
Total 35

Zoning Analysis

Overlay District

Needham Center Overlay Sub-District A

Floor Area Ratio (FAR) (Note #1)

1.44

Height

4 Stories / 48 FT

Off-Street Parking

	Required	Provided
• Housing (1.5 Spaces x 12 Units)	18 Spaces	24 Spaces
• Retail - Existing Space (4,960 SF / 1 Space per 300 SF)	17 Spaces	11 Spaces
• Retail - New Space (4,960 SF / 1 Space per 300 SF)	17 Spaces	0 Spaces
Mixed Use Total	52 Spaces	35 Spaces

Parking Shortfall

Total Spaces Required 52 Spaces

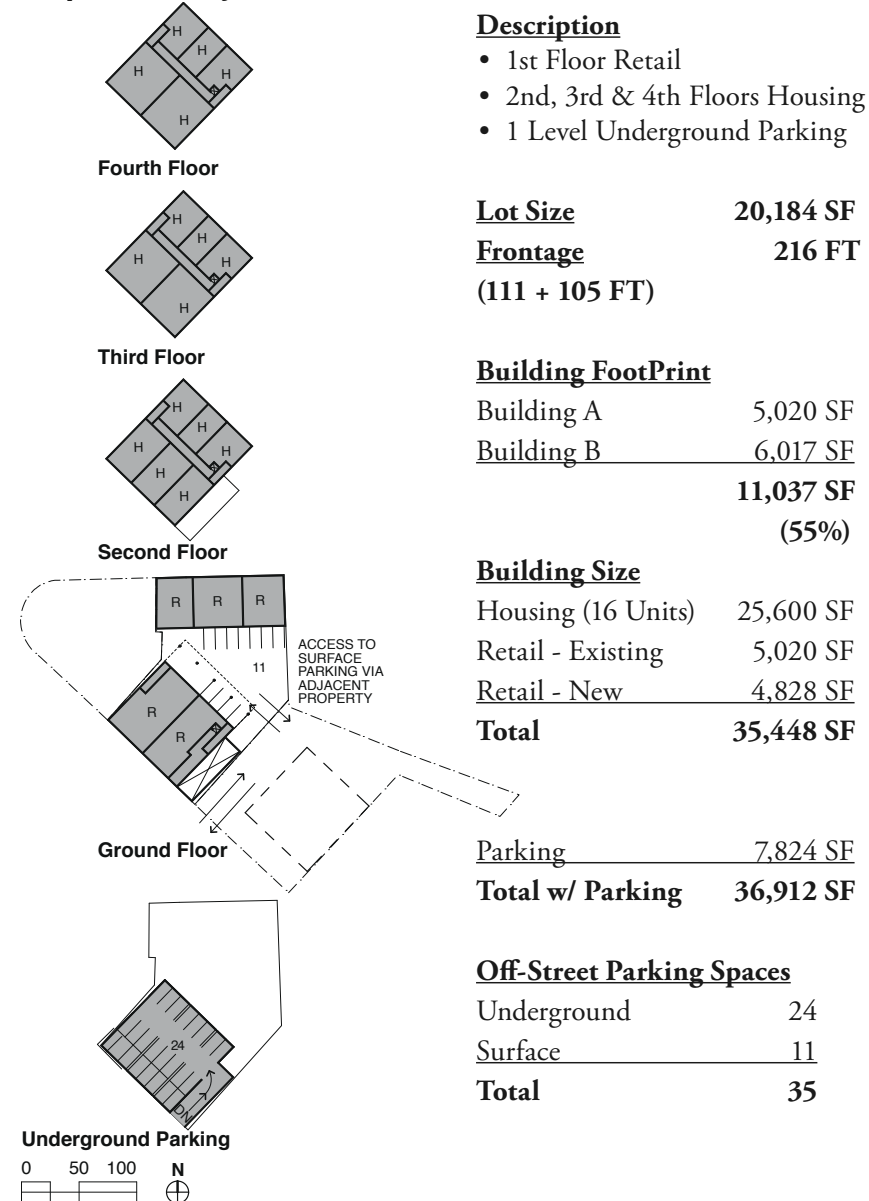
Total Spaces Provided 35 Spaces

Waiver Required For: 17 Spaces (32% of Total Required)

Note #1 - Does not include underground parking.

Theater Block - Option 1B - Mixed Use - Retail & Housing - 16 Housing Units

Proposed Project



Description

- 1st Floor Retail
- 2nd, 3rd & 4th Floors Housing
- 1 Level Underground Parking

Lot Size 20,184 SF
Frontage 216 FT
 (111 + 105 FT)

Building FootPrint

Building A 5,020 SF
 Building B 6,017 SF
11,037 SF
 (55%)

Building Size

Housing (16 Units) 25,600 SF
 Retail - Existing 5,020 SF
 Retail - New 4,828 SF
Total 35,448 SF

Parking 7,824 SF
Total w/ Parking 36,912 SF

Off-Street Parking Spaces

Underground 24
 Surface 11
Total 35

Zoning Analysis

Overlay District

Needham Center Overlay Sub-District A

Floor Area Ratio (FAR) (Note #1)

1.76

Height

4 Stories / 48 FT

Off-Street Parking

	Required	Provided
• Housing (1.5 Spaces x 16 Units)	24 Spaces	24 Spaces
• Retail - Existing Space (4,960 SF / 1 Space per 300 SF)	17 Spaces	11 Spaces
• Retail - New Space (4,828 SF / 1 Space per 300 SF)	17 Spaces	0 Spaces
Mixed Use Total	58 Spaces	35 Spaces

Parking Shortfall

Total Spaces Required 58 Spaces

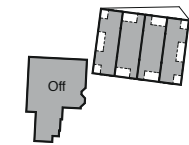
Total Spaces Provided 35 Spaces

Waiver Required For: 23 Spaces (40% of Total Required)

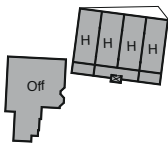
Note #1 - Does not include underground parking.

1110 Great Plain Avenue - Option 2A (As Built) - Mixed Use - Housing, Office & Retail - 4 Housing Units

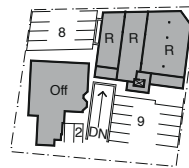
Proposed Project



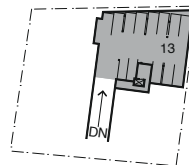
Third Floor



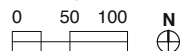
Second Floor



Ground Floor



Underground Parking



Description

Building A

- 1st, 2nd & 3rd Floors Office Space

Building B

- 1st Floor Retail
- 2nd & 3rd Floors Housing
- 1 Level Underground Parking

Lot Size

18,964 SF

Frontage

144 FT

Building FootPrint

Building A 2,912 SF

Building B 5,023 SF

Total 7,935 SF
(42%)

Building Size

Office 8,737 SF

Retail 4,345 SF

Housing (4 Units) 7,805 SF

Total 20,887 SF

Parking 5,130 SF

Total w/ Parking 26,017 SF

Off-Street Parking Spaces

Underground 13

Surface 19

Total 32

Zoning Analysis

Overlay District

Needham Center Overlay Sub-District B

Floor Area Ratio (FAR) (Note #1)

1.10

Height

3 Stories / 34.41 FT

Off-Street Parking

	<u>Required</u>	<u>Provided</u>
• Housing (1.5 Spaces x 4 Units)	6 Spaces	13 Spaces
• Retail (4,345 SF / 1 Space per 300 SF)	15 Spaces	
• Office Ground Flr - (2,912 SF / 1 Space per 300 SF)	10 Spaces	19 Spaces
• Office - 2nd & 3rd Flrs		
(80% x 5,825 SF / 1 Space per 300 SF)	16 Spaces	
Mixed Use Total	47 Spaces	32 Spaces

Parking Shortfall

Total Spaces Required 47 Spaces

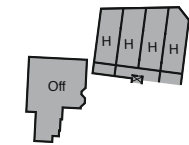
Total Spaces Provided 32 Spaces

Waiver Required For: 15 Spaces (32% of Total Required)

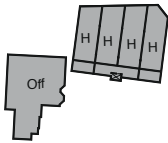
Note #1 - Does not include underground parking.

1110 Great Plain Avenue - Option 2B - Mixed Use - Housing, Office & Retail - 8 Housing Units

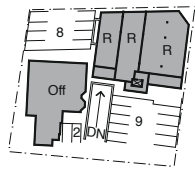
Proposed Project



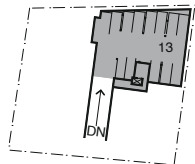
Third Floor



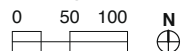
Second Floor



Ground Floor



Underground Parking



Description

Building A

- 1st, 2nd & 3rd Floors Office Space

Building B

- 1st Floor Retail
- 2nd & 3rd Floors Housing
- 1 Level Underground Parking

Lot Size

18,964 SF

Frontage

144 FT

Building FootPrint

Building A 2,912 SF

Building B 5,023 SF

Total 7,935 SF
(42%)

Building Size

Office 8,737 SF

Retail 4,345 SF

Housing (4 Units) 10,260 SF

Total 23,342 SF

Parking 5,130 SF

Total w/ Parking 28,472 SF

Off-Street Parking Spaces

Underground 13

Surface 19

Total 32

Zoning Analysis

Overlay District

Needham Center Overlay Sub-District B

Floor Area Ratio (FAR) (Note #1)

1.23

Height

3 Stories / 37 FT

Off-Street Parking

	<u>Required</u>	<u>Provided</u>
• Housing (1.5 Spaces x 8 Units)	12 Spaces	13 Spaces
• Retail (4,345 SF / 1 Space per 300 SF)	15 Spaces	
• Office Ground Flr - (2,912 SF / 1 Space per 300 SF)	10 Spaces	19 Spaces
• Office - 2nd & 3rd Flrs (80% x 5,825 SF / 1 Space per 300 SF)	16 Spaces	
Mixed Use Total	53 Spaces	32 Spaces

Parking Shortfall

Total Spaces Required 53 Spaces

Total Spaces Provided 32 Spaces

Waiver Required For: 21 Spaces (40% of Total Required)

Note #1 - Does not include underground parking.

392 Chestnut Street - Option 3A (As Built) - Medical Office - 2 Lots

Proposed Project

Description

- 1st & 2nd Floors Medical Offices

Lot Size (Note #2)

Lot A	17,660 SF
Lot B	14,400 SF
Total	32,060 SF

Frontage (Note #2)

396 FT

Building FootPrint (Note #2)

4,916 SF

(15%)

Building Size

Medical Office	9,939 SF
Total	9,939 SF

Off-Street Parking

Surface

- Lot A 18
- Lot B 32

Total 50

Zoning Analysis

Overlay District

Lower Chestnut Street Overlay District

Floor Area Ratio (FAR) (Notes #1 & #2)

0.31

Height

2 Stories / 35 FT

Off-Street Parking

- Medical Office (1 Space per 200 SF)

Required

50 Spaces

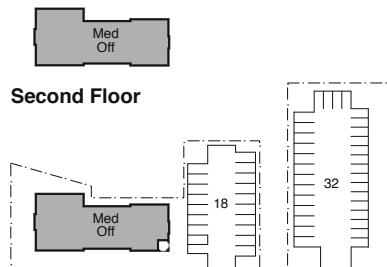
Provided

50 Spaces

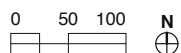
Project complies with parking requirements

Note #1 - Does not include underground parking.

Note #2 - For the purpose of this analysis the total lot area of both lots is used.



Ground Floor



392 Chestnut Street - Option 3B - Medical Office - 1 Lot

Proposed Project

Description

- 1st & 2nd Floors Medical Offices

Lot Size 17,660 SF

Frontage 306 FT

Building FootPrint 4,916 SF
(28%)

Building Size

Medical Office 9,939 SF

Total 9,939 SF

Off-Street Parking

Surface 18

Total 18

Zoning Analysis

Overlay District

Lower Chestnut Street Overlay District

Floor Area Ratio (FAR) (Note #1)

0.56

Height

2 Stories / 35 FT

Off-Street Parking

- Medical Office (1 Space per 200 SF)

Required

50 Spaces

Provided

18 Spaces

Parking Shortfall

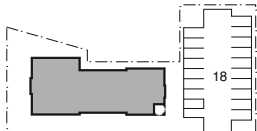
Total Spaces Required 50 Spaces

Total Spaces Provided 18 Spaces

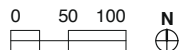
Waiver Required For: 32 Spaces (64% of Total Required)



Second Floor



Ground Floor



Note #1 - Does not include underground parking.

392 Chestnut Street - Option 3C - Medical Office - 1 Lot - Underground Parking

Proposed Project

Description

- 1st & 2nd Floors Medical Offices
- 1 Level Underground Parking

Lot Size (Note #2) 11,660 SF
Frontage 306 FT

Building FootPrint (Note #2) 4,916 SF (42%)

Building Size

Medical Office 9,939 SF
Total 9,939 SF

Parking 6,605 SF
Total w/ Parking 16,544 SF

Off-Street Parking

Underground Parking 18
Total 18

Zoning Analysis

Overlay District

Lower Chestnut Street Overlay District

Floor Area Ratio (FAR) (Note #1)

0.85

Height

2 Stories / 35 FT

Off-Street Parking

- Medical Office (1 Space per 200 SF)

Required

50 Spaces

Provided

18 Spaces

Parking Shortfall

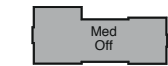
Total Spaces Required 50 Spaces

Total Spaces Provided 18 Spaces

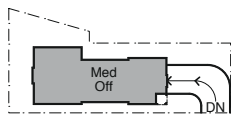
Waiver Required For: 32 Spaces (64% of Total Required)

Note #1 - Does not include underground parking.

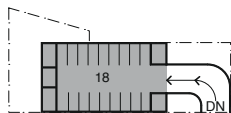
Note #2 - For the purpose of this analysis the lot size has been reduced to 11,660 SF.



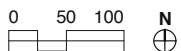
Second Floor



Ground Floor

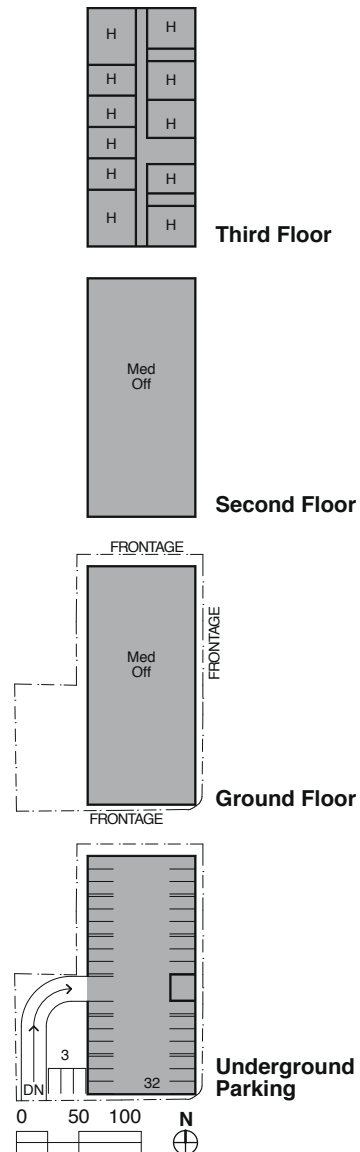


Underground Parking



Chestnut Place - Option 4A - Mixed Use - 2 Floors Medical Offices & 1 Floor Housing

Proposed Project



Description

- 1st & 2nd Floors Medical Offices
- 3rd Floor Housing
- 1 Level Underground Parking

Lot Size 25,633 SF

Frontage 450 FT

Building FootPrint 16,765 SF
(65%)

Building Size

Housing (11 Units) 16,765 SF
Medical Office 33,530 SF

Total 50,295 SF

Parking 16,765 SF

Total w/ Parking 67,060 SF

Off-Street Parking

Below Ground 32

Surface 3

Total 35

Zoning Analysis

Overlay District

Lower Chestnut Street Overlay District

Floor Area Ratio (FAR) (Note #1)

1.96

Height

3 Stories / 37 FT

Off-Street Parking

	Required	Provided
• Housing (1.5 Spaces x 11 Units)	17 Spaces	17 Spaces
• Medical Office - (33,530 SF / 1 Space per 200 SF)	168 Spaces	18 Spaces
Mixed Use Total	185 Spaces	35 Spaces

Parking Shortfall

Total Spaces Required 186 Spaces

Total Spaces Provided 35 Spaces

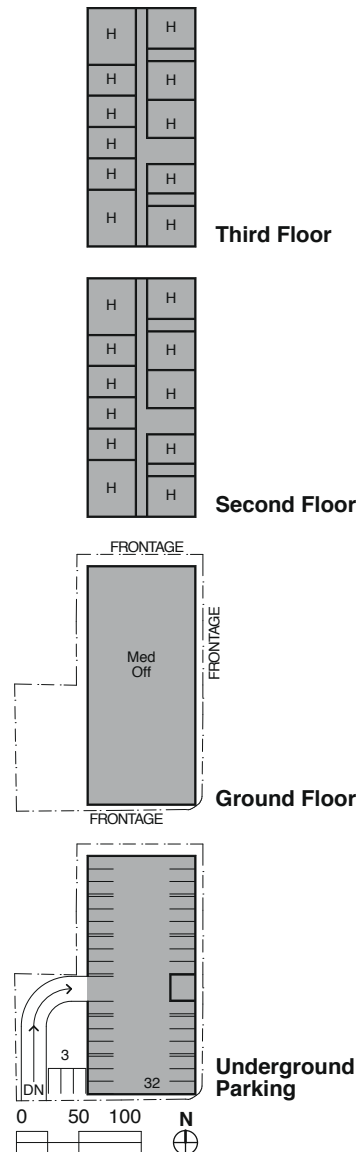
151 Spaces (81% of Total Required)

THIS PROJECT DOES NOT WORK BECAUSE OF THE EXCESSIVE PARKING SHORTFALL

Note #1 - Does not include underground parking.

Chestnut Place - Option 4B - Mixed Use - 1 Floor Medical Offices & 2 Floors Housing

Proposed Project



Description

- 1st Floor Medical Offices
- 2nd & 3rd Floor Housing
- 1 Level Underground Parking

Lot Size 25,633 SF

Frontage 450 FT

Building FootPrint 16,765 SF
(65%)

Building Size

Housing (22 Units) 33,530 SF

Medical Office 16,725 SF

Total 50,295 SF

Parking 16,765 SF

Total w/ Parking 67,060 SF

Off-Street Parking

Below Ground 32

Surface 3

Total 35

Zoning Analysis

Overlay District

Lower Chestnut Street Overlay District

Floor Area Ratio (FAR) (Note #1)

1.96

Height

3 Stories / 37 FT

Off-Street Parking

	<u>Required</u>	<u>Provided</u>
• Housing (1.5 Spaces x 22 Units)	33 Spaces	33 Spaces
• Medical Office - (16,765 SF / 1 Space per 200 SF)	84 Spaces	2 Spaces
Mixed Use Total	117 Spaces	35 Spaces

Parking Shortfall

Total Spaces Required 117 Spaces

Total Spaces Provided 35 Spaces

82 Spaces (70% of Total Required)

THIS PROJECT DOES NOT WORK BECAUSE OF THE EXCESSIVE PARKING SHORTFALL

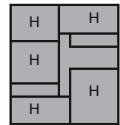
Note #1 - Does not include underground parking.

Chestnut Place - Option 4C - Mixed Use - 1 Floor Medical Office & 2 Floors Housing - Smaller Building

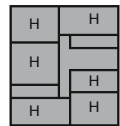
Proposed Project

Description

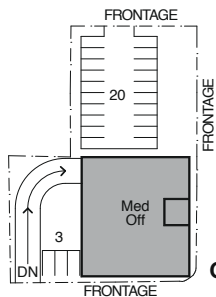
- 1st Floor Medical Offices
- 2nd & 3rd Floors Housing
- 1 Level Underground Parking



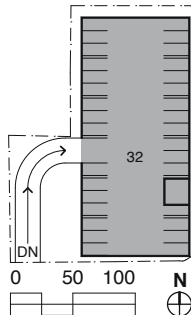
Third Floor



Second Floor



Ground Floor



Underground Parking

Lot Size 25,633 SF
Frontage 450 FT

Building FootPrint 8,400 SF
 (33%)

Building Size

Housing (11 Units) 16,800 SF
 Medical Office 8,400 SF

Total 25,200 SF

Parking 16,765 SF
Total w/ Parking 41,965 SF

Off-Street Parking

Below Ground 32
 Surface 23
Total 55

Zoning Analysis

Overlay District

Lower Chestnut Street Overlay District

Floor Area Ratio (FAR) (Note #1)

0.98

Height

3 Stories / 37 FT

Off-Street Parking

	<u>Required</u>	<u>Provided</u>
• Housing (1.5 Spaces x 11 Units)	17 Spaces	17 Spaces
• Medical Office - (8,400 SF / 1 Space per 200 SF)	42 Spaces	38 Spaces
Mixed Use Total	59 Spaces	55 Spaces

Parking Shortfall

Total Spaces Required 59 Spaces

Total Spaces Provided 55 Spaces

Waiver Required For: 4 Spaces (7% of Total Required)

Note #1 - Does not include underground parking.